

ABSTRACT

**THE EFFECT OF TEMPERATURE AND EXTRACTION TIME TO
EPIGALLOCATECHIN GALLATE (EGCG) CONTENT PROFILE
IN GREEN TEA RESIDUE**

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Aim of this study was to determine the effect of temperature and extraction time of green tea on the profile of EGCG content in green tea residue. The temperature used to observe the effect of temperature were 50 °C, 75 °C and 90 °C while the time used for observation set at 3, 6 and 9 minutes. The result of water content determination was 5.215%. HPLC condition was using mobile phase composed by methanol, water, acetic acid 2% (35: 60: 5), with a flow rate of 1.0ml/min and wavelength of 274 nm. Parameter validation methods used were selectivity, linearity, accuracy, precision, limit of detection and quantification. The results of the five parameters met the requirements so the method used has been validated. The result of determination on the profile of EGCG content in green tea residue was $5.6212 \pm 0.0292\%$ dry weight. EGCG residues were obtained by levels of EGCG study minus levels of dissolved EGCG. In the result, the higher of the temperature can decrease the level of EGCG in green tea residue and the higher of the time extraction wil decrease the level of EGCG in green tea residue.

Keywords : Green tea, EGCG, HPLC